## LISTING OF THE CLAIMS

__X__ This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims:

1. (Original) A method for characterising features of paper based on computer vision, characterised in that from pictures of numerous paper samples are extracted multi-dimensional features describing features of paper; the said features are entered as input into a learning classifier operating in an unsupervised manner, which produces a projection of the said data of each picture part in a low-dimension space, so that paper grades having close properties produce close projections in the low-dimension space and the classification results projected in the low-dimension space are used to aid classification.

2. (Original) A method for characterising paper as claimed in claim 1, characterised in that the said learning system operating in an unsupervised manner is an unsupervised clustering method or its simulation, for example, a SOM (Self- Organising Map).

3. (Currently Amended) A method for characterising paper as claimed in claim 1 ~~or 2~~, characterised in that the feature describing the paper samples is a LBP or a bit pattern feature derived from it.

4. (Currently Amended) A method for characterising features of paper as claimed in ~~any of the above claims~~ claim 1, characterised in that according to the method, paper is in addition imaged and classified at different stages of its manufacture.

5. (Original) A method for characterising features of paper as claimed in claim 4, characterised in that the samples imaged at different stages of the manufacture are processed further by means of the unsupervised learning classifier in such a way that the classification will also concern the progressing of the manufacturing process.

6. (Currently Amended) A ~~system~~ method as claimed in claim 5, characterised in that in addition to the image information, selected process parameters and/or measurement results are used as input.

7. (Original) A system for classifying paper using computer vision, characterised in that the system comprises imaging means, means for extracting the features describing paper quality from an image of the paper, and means for unsupervised learning classification into a space with a low-dimension space compared with the feature space.